

Title (en)
LATERAL FIELD-EFFECT TRANSISTOR AND PREPARATION METHOD THEREFOR

Title (de)
LATERALER FELDEFFEKTTRANSISTOR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TRANSISTOR À EFFET DE CHAMP LATÉRAL ET SON PROCÉDÉ DE PRÉPARATION

Publication
EP 4228006 A4 20240515 (EN)

Application
EP 22879620 A 20220915

Priority
• CN 202111629255 A 20211228
• CN 2022118904 W 20220915

Abstract (en)
[origin: EP4228006A1] The present disclosure provided a lateral field-effect transistor and its preparing method, relating to semiconductor technological field. A gate pad and a source pad configured by the lateral field transistor in a passive region extend from a first surface of a device functional layer to a surface of substrate respectively. The gate pad is isolated from the device functional layer and the substrate respectively. The source pad is shorted to the substrate. Therefore, through a capacitance structure formed between the gate pad and the source pad shorted to the substrate, the capacitance of a device that formed between the gate pad and source pad may be increased, thereby effectively alleviating the generated oscillation, reducing the loss of a power device, and avoiding the false turn-on of the lateral field-effect transistor.

IPC 8 full level
H01L 29/778 (2006.01); **H01L 23/522** (2006.01); **H01L 23/64** (2006.01); **H01L 29/417** (2006.01); **H01L 23/482** (2006.01); **H01L 29/10** (2006.01); **H01L 29/20** (2006.01)

CPC (source: EP US)
H01L 29/0607 (2013.01 - US); **H01L 29/0847** (2013.01 - US); **H01L 29/1066** (2013.01 - EP); **H01L 29/41758** (2013.01 - US); **H01L 29/41766** (2013.01 - EP); **H01L 29/41775** (2013.01 - US); **H01L 29/4236** (2013.01 - US); **H01L 29/66462** (2013.01 - US); **H01L 29/7786** (2013.01 - EP US); **H01L 23/4824** (2013.01 - EP); **H01L 23/535** (2013.01 - EP); **H01L 23/66** (2013.01 - EP); **H01L 29/0865** (2013.01 - US); **H01L 29/2003** (2013.01 - EP US); **H01L 29/66681** (2013.01 - US); **H01L 29/7825** (2013.01 - US); **H01L 2223/6655** (2013.01 - EP)

Citation (search report)
[X] US 2021335713 A1 20211028 - HUANG XIN-HUA [TW], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4228006 A1 20230816; **EP 4228006 A4 20240515**; CN 114335165 A 20220412; JP 2024504693 A 20240201; US 2023299128 A1 20230921; WO 2023124246 A1 20230706

DOCDB simple family (application)
EP 22879620 A 20220915; CN 202111629255 A 20211228; CN 2022118904 W 20220915; JP 2023544225 A 20220915; US 202318201771 A 20230525